

# EILAR ASSOCIATES, INC.

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April 21, 2009

## County of San Diego

Department of Planning and Land Use

c/o Maha Arabshahi

1542 Silver Tree Lane

Escondido, California 92026

Job #A81206N1

## **SUBJECT: RESPONSE TO FIRST ITERATION REVIEW OF ARABSHAH MINOR SUBDIVISION; TPM 21136; S09-003; ER 08-08-021**

This letter is in response to your letter of March 30, 2009 concerning the first iteration review of the above-referenced project. The minor change to the report has been provided, and shown in strikeout/underline format. This letter will reference the location of each response to the requested change(s) indicated on your letter.

*Italics are added to indicate County of San Diego Staff comments.*

### **Noise Study**

#### **Item # Issue, Revision, or Information Required**

- 2.006 *Staff has reviewed the Acoustical Analysis Report dated January 21, 2009 submitted on February 3, 2009. The noise report is considered close to complete with minor comments. The project proposes a minor subdivision that will require noise mitigation to be installed. The noise report addresses all associated noise impacts and identifies all the appropriate noise mitigation required to ensure compliance with the County Noise Element noise thresholds. Although the noise report is well constructed, staff is requesting additional noise figure illustrations to support the free standing wall option.*
- 2.007 *In reference to Parcel 1, please include an additional figure illustration showing the free standing 8-foot high wall scenario. This illustration can be similar to Figure 7. Please ensure that the location of the free-standing 8-foot high sound wall is shown on a figure illustration.*
- 2.008 *In reference to Parcel 2, a free standing 5-foot high wall illustration is not required because this parcel has an existing residential structure that is to remain.*
- 2.009 *Staff will provide final recommendations upon review and acceptance of the revised noise report illustrating the free standing 8-foot high sound wall scenario in reference to Parcel 1.*

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**Response:**

Please refer to the new Figure 8: Site Plan Showing Free Standing Sound Attenuation Barrier Evaluation Location. This figure is referenced in Section 5.1.

Please call if you have any questions or require additional information.

**EILAR ASSOCIATES, INC.**



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Douglas K. Eilar  
Principal/Senior Acoustical Consultant



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Amy Lynn Hool, Acoustical Consultant

# ACOUSTICAL ANALYSIS REPORT

**Arabshahi Silver Tree Lane Subdivision  
1542 Silver Tree Lane  
County of San Diego, California**

**Tentative Parcel Map 21136; S09-003;  
Environmental Log No. 08-08-021; KIVA Project 08-0100997**

## **Prepared For**

**Maha Arabshahi**  
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**Job #A81206N1**

**Original Report: January 21, 2009  
First Iteration Revision: April 21, 2009**

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## APPENDICES

- A. Site Plans
- B. Traffic Noise Model (TNM) Data and Results
- C. Pertinent Sections of the County of San Diego Noise Element to the General Plan

## 1.0 EXECUTIVE SUMMARY

The proposed project, the Arabshahi Silver Tree Lane subdivision, consists of the division of a parcel into two single-family residential private lots. The project site is located at 1542 Silver Tree Lane in the unincorporated area of the County of San Diego, California.

The primary noise sources in the vicinity of the project site include traffic noise from Interstate 15 (I-15) and North Centre City Parkway, with a minor noise contribution from the I-15 Northbound off-ramp to Deer Springs Road, and Mountain Meadow Road. The current calculated on-site noise level at the southwestern corner of the project site is 69.1 CNEL. Due to a projected increase in traffic volume, the future (year 2030) noise level at the same location is expected to increase to 71.3 CNEL.

Calculations show that in the future noise environment, most of both lots will be exposed to noise levels greater than 65 CNEL. The County of San Diego requires that at least 10% of the net lot area be protected from noise levels greater than 60 CNEL. In order to meet County of San Diego noise regulations, a 7.5 feet high sound barrier wall should be constructed on the east side of the residence on Parcel 1, and a 5 feet high sound barrier wall should be constructed similarly on the east side of the residence on Parcel 2. With this mitigation in place, the noise levels in the outdoor use areas of both lots will be in compliance with County of San Diego noise standards. See Section 5.1 for more details.

Due to the high exterior noise levels, both residences have a potential failure to achieve interior noise levels of less than 45 CNEL, as specified by County of San Diego regulations. However, with appropriate wall construction and glazing specifications, these noise levels can easily be achieved. If desired, an exterior to interior analysis for residences on this property can be conducted when building plans become available.

The County of San Diego Noise Ordinance states that construction noise should not exceed an eight-hour equivalent noise level of 75 dBA. Since the building pad has already been prepared on Parcel 1, and the residence on Parcel 2 is existing, there is very little site preparation that needs to take place prior to the actual construction of the residence. Therefore, it has been determined that temporary construction noise will not be a substantial nuisance to surrounding residences. Nevertheless, equipment used in construction shall be maintained in proper operating condition, and engines shall be equipped with appropriate mufflers. Additionally, construction should be limited to the hours of 7 a.m. to 7 p.m., Monday through Saturday, in accordance with County of San Diego regulations. With these recommendations, it is expected that construction equipment noise levels will be below an average eight-hour equivalent noise level of 75 dBA, in compliance with County of San Diego regulations.

## **2.0 INTRODUCTION**

This acoustical analysis report is submitted to satisfy the acoustical requirements of the County of San Diego for Tentative Parcel Map (TPM 21136) approval. Its purpose is to assess noise impacts from nearby roadway traffic to identify project features or requirements necessary to achieve exterior outdoor use areas to noise levels below 60 CNEL, and feasibility of achieving interior noise levels of 45 CNEL or less in habitable residential space, in compliance with the County of San Diego and State of California noise regulations.

All noise level or sound level values presented herein are expressed in terms of decibels, with A-weighting to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol  $L_{EQ}$ , for a specified duration. The CNEL is a 24-hour average, where sound levels during evening hours of 7 p.m. to 10 p.m. have an added 5 dB weighting, and sound levels during nighttime hours of 10 p.m. to 7 a.m. have an added 10 dB weighting. This is similar to the Day-Night sound level,  $L_{DN}$ , which is a 24-hour average with an added 10 dB weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on A-weighted decibels. These metrics are used to express noise levels for both measurement and municipal regulations, for land use guidelines, and for enforcement of noise ordinances. Further explanation can be provided upon request.

### **2.1 Project Location**

The project site is located at 1542 Silver Tree Lane, in the County of San Diego, California, just north of the City of Escondido. The Assessor's Parcel Number (APN) for the property is 187-630-07. The overall property is rectangular in shape with an overall site area of approximately 2.91 acres. Surrounding properties are residential to the north and east, agricultural to the south, and unoccupied to the west.

The project location is shown on the Vicinity Map, Figure 1, following this report. An Assessor's Parcel Map, Satellite Aerial Photograph, and Topographic Map are also provided as Figures 2 through 4.

### **2.2 Project Description**

The proposed project consists of the division of a parcel into two single-family residential private lots. The project site currently has existing greenhouses on site, as well as an existing residence to remain with the new development. A new residence will be constructed on the other lot. The net lot areas are 1.09 acres and 1.27 acres.

The project site is located within the North County Metro Subregional Plan Area in the County of San Diego. The property is zoned A70 (agricultural), and the minimum lot size is one acre.

## 3.0 ENVIRONMENTAL SETTING

### 3.1 Existing Noise Environment

The primary noise sources in the vicinity of the project site include traffic noise from Interstate 15 (I-15) and North Centre City Parkway, with a minor noise contribution from the I-15 Northbound off-ramp to Deer Springs Road and Mountain Meadow Road. Conducting traffic volume research through the San Diego Association of Governments (SanDAG) Series 11 Transportation Forecast Information Center, it was determined that no current or future traffic volume information is available for Silver Tree Drive because of the low traffic volume on this small residential roadway.

#### 3.1.1 Vehicle Traffic Noise

I-15 is an eight-lane, two-way Freeway running north-south to the west of the project site. The posted speed limit is 65 mph. I-15, in the vicinity of the project site, currently carries a traffic volume of approximately 65,000 Average Daily Trips (ADT) traveling northbound and 66,000 ADT traveling southbound, according to the SanDAG Series 11 Transportation Forecast Information Center information center located on the SanDAG website at [gis.sandag.org/tficsr11/](http://gis.sandag.org/tficsr11/).

North Centre City Parkway is a four-lane, two-way Collector running north-south to the west of the project site. The posted speed limit is 55 mph. North Centre City Parkway, in the vicinity of the project site, currently carries a traffic volume of approximately 6,000 ADT.

The I-15 Northbound off-ramp at Deer Springs Road, located to the west of the project site, is a one-lane, one-way ramp running north. The posted speed limit is 45 mph. Currently, the I-15 Northbound off-ramp carries 5,800 ADT, according to Caltrans 2007 Ramp Volumes.

Mountain Meadow Road is a four-lane, two-way Collector running east-west to the north of the project site. The posted speed limit is 35 mph. Mountain Meadow Road, in the vicinity of the project site, currently carries a traffic volume of approximately 8,000 ADT.

The current measured on-site traffic noise level at the southwestern corner of the project site is 68.8 CNEL. Current and future traffic volumes for the roadway sections near the project site are shown in Table 1. For further roadway details and projected future ADT traffic volumes, please refer to Appendix B: Traffic Noise Model (TNM) Data and Results.

Table 1. Overall Roadway Traffic Information				
Roadway Name	Speed Limit (mph)		Current ADT	Future (2030) ADT
	Current	Future		
I-15 Northbound	65	65	65,000	108,000
I-15 Southbound	65	65	66,000	103,000
North Centre City Parkway	55	55	6,000	20,000
I-15 Northbound off-ramp	45	45	5,800	6,000
Mountain Meadow Road	35	55*	8,000	28,000

\*Minimum design speed designated for Collector roadways in County of San Diego Public Roads Standards.

Without mitigation or proposed project structures, the proposed project site falls primarily between the 65 CNEL and 70 CNEL contours. The entire property will be exposed to greater than 60 CNEL. For a graphical representation of these contours, please refer to Figure 5: Site Plan Showing Current Traffic CNEL Contours and Noise Measurement Location.

### 3.1.2 Measured Noise Level

An on-site inspection and traffic noise measurement were made on the morning of Friday, December 19, 2008. The weather conditions were as follows: clear skies, low humidity, temperatures in the mid 60's with winds at 3-5 mph. A "one-hour" equivalent measurement was made at the southwestern corner of the project site. The microphone position was placed approximately five feet above the existing project site grade. Traffic volumes for Silver Tree Lane were recorded for automobiles, medium-size trucks, and large trucks during the measurement period. After a continuous 15-minute sound level measurement, there was no change in the  $L_{EQ}$  and results were then recorded. The measured noise level and related weather conditions are found in Table 2. The calculated equivalent hourly vehicle traffic count adjustment and a complete tabular listing of all traffic data recorded during the on-site traffic noise measurement are found in Appendix B: Traffic Noise Model Data and Results.

Table 2. On-Site Noise Measurement Conditions and Results	
Date	Friday, December 19, 2008
Time	9:00 a.m. – 9:15 a.m.
Conditions	Clear Skies, Winds at 3-5 mph, Temperature Mid 60's with Low Humidity
Measured Noise Level	66.8 dBA $L_{EQ}$

### 3.1.3 Calculated Noise Level

Noise levels were calculated for the site using the methodology described in Section 4.1 (see next page) for the location, conditions, and traffic volumes counted during the noise measurements. The calculated noise levels ( $L_{EQ}$ ) were compared with the measured on-site noise level to determine if adjustments or corrections (calibration) should be applied to the traffic noise prediction model, Traffic Noise Model Version 2.5. Adjustments are intended to account for site-specific differences, such as reflection and absorption, which may be greater or lesser than accounted for in the model.

The measured noise level of 66.8 dBA  $L_{EQ}$  was compared to the calculated (modeled) noise level of 67.1 dBA  $L_{EQ}$ , for the same conditions and traffic flow. As there was only a 0.3 dB difference between the measured and the calculated noise level, no adjustment was deemed necessary to model future noise levels for this location. Please refer to Table 3, for further evaluation.

Table 3. Calculated versus Measured Traffic Noise Data				
Receiver Location	Calculated	Measured	Difference	Correction
Southwest Corner of Property	67.1 dBA $L_{EQ}$	66.8 dBA $L_{EQ}$	0.3 dB	None



## **3.2 Future Noise Environment**

The future (2030) traffic volumes for these roadways are based on numbers obtained from the San Diego Association of Governments (SanDAG) Series 11 Transportation Forecast Information Center. The future (2030) traffic volume is projected to be 108,000 ADT for I-15 Northbound, and the volume is projected to be 103,000 for I-15 Southbound. The traffic volume for North Centre City Parkway is expected to increase to 20,000 ADT by 2030. The I-15 Northbound off-ramp at Deer Springs Road is expected to carry 6,000 ADT by 2030. In the year 2030, the traffic volume of Mountain Meadow Road is expected to increase to 28,000 ADT. The future traffic noise level at the southwestern corner of the project site is expected to increase to 71.3 CNEL.

The roadway classification, speed limit, alignment and roadbed grade elevations are expected to remain the same for North Centre City Parkway and the I-15 Northbound off-ramp; however I-15 is expected to add three high-occupancy vehicle (HOV) lanes heading southbound, and one HOV lane heading northbound. Future traffic volumes shown above account for the addition of these lanes. Additionally, the modeled speed limit of Mountain Meadow Road was increased from 35 mph to 55 mph, in accordance with the County of San Diego Public Roads Standards designation of minimum design speed for a Collector roadway. For further roadway details and projected future ADT traffic volumes, please refer to Appendix B: Traffic Noise Model (TNM) Data and Results.

## **4.0 METHODOLOGY AND EQUIPMENT**

### **4.1 Methodology**

#### **4.1.1 Field Measurement**

Typically, a “one-hour” equivalent sound level measurement ( $L_{EQ}$ , A-Weighted) is recorded for at least one noise-sensitive location on the site. During the on-site noise measurement, start and end times are recorded, vehicle counts are made for cars, medium trucks (double-tires/two axles), and heavy trucks (three or more axles) for the corresponding road segment(s). Supplemental sound measurements of one hour or less in duration are often made to further describe the noise environment of the site.

For measurements of less than one hour in duration, the measurement time is long enough for a representative traffic volume to occur and the noise level ( $L_{EQ}$ ) to stabilize; 15 minutes is usually sufficient for this purpose. The vehicle counts are then converted to one-hour equivalent volumes by using the appropriate multiplier. Other field data gathered includes measuring or estimating distances, angles-of-view, slopes, elevations, roadway grades, and vehicle speeds. This data was checked against the available maps and records.

#### **4.1.2 Roadway Noise Calculation**

The Traffic Noise Model, Version 2.5 program released by the U.S. Department of Transportation was used to calculate the future daytime average hourly noise level (HNL) at various locations at the project site. The daytime average hourly traffic volume is calculated as 0.058 times the ADT, based on the studies made by Wyle Laboratories (see reference). The HNL is equivalent to the  $L_{EQ}$ , and both are converted to the CNEL by adding 2.0 decibels, as shown in the Wyle Study. Future CNEL is calculated for desired receptor locations using future road alignment, elevations, lane configurations, projected traffic volumes, estimated truck mixes, and vehicle speeds. Noise

attenuation methods may be analyzed, tested, and planned with TNM, as required. Further explanation can be supplied on request.

## **4.2 Measurement Equipment**

Some or all of the following equipment was used at the site to measure existing noise levels:

- Larson Davis Model 720 Integrating Sound Level Meter, Serial # 0110
- Larson Davis Model CA150 Calibrator, Serial # 0203
- Hand-bearing magnetic compass, microphone with windscreen, tripods
- Distance measurement wheel, digital camera

The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterward, to ensure accuracy. All sound level measurements conducted and presented in this report, in accordance with the regulations, were made with a sound level meter that conforms to the American National Standards Institute specifications for sound level meters ANSI S1.4-1983 (R2001). All instruments are maintained with National Bureau of Standards traceable calibration, per the manufacturers' standards.

## **5.0 IMPACTS AND MITIGATION**

### **5.1 Exterior**

The future noise environment is primarily the result of vehicle traffic traveling on I-15 and North Centre City Parkway, with a minor contribution from the I-15 Northbound off-ramp and Mountain Meadow Road. Without mitigation or proposed project structures, most of the proposed project site will be located between the 65 CNEL and 70 CNEL contours, with a portion of land on Parcel 1 exposed to greater than 70 CNEL. All of the property will be exposed to greater than 60 CNEL. For a graphical representation of these contours, please refer to Figure 6: Site Plan Showing Future Traffic CNEL Contours and Noise Measurement Location.

The County of San Diego Noise Element to the General Plan states that exterior noise levels shall not exceed 60 CNEL at residential outdoor usable areas. According to Policy 4b found within the Noise Element, single-family residential units with a net lot area between 4,000 square feet and 10 acres should have at least 10% of the net lot area where the noise level complies with the County standard of 60 CNEL or less. The net lot areas of the two parcels are 1.09 acres and 1.27 acres. For analysis purposes, four receiver points were placed on each parcel, encompassing an area of 4,800 square feet on Parcel 1 and 6,000 square feet on Parcel 2, in the spaces located to the east of the proposed residence on Parcel 1, and to the east of the existing residence on Parcel 2. Analysis of future traffic noise shows that, without mitigation, noise levels at outdoor use areas of will exceed the maximum allowable noise levels.

The future noise environment was examined with no structures present, with free standing sound barrier walls, with the existing or proposed residences as barriers, and with the existing or proposed residences and sound walls as barriers. The residence on Parcel 1 is representative of a typical residence building envelope. The results of the analysis are shown in Tables 4 and 5. For additional details, please see Appendix B: Traffic Noise Model (TNM) Data and Results.

Table 4. Mitigated Future Traffic CNEL at Proposed Outdoor Use Areas of Parcel 1				
Receiver	Future Exterior Traffic CNEL			
	No Structure	With 8' High Free-Standing Sound Wall	Residence	Residence + 7.5' High Sound Wall
1-1	69.9	58.7	69.9	57.8
1-2	68.1	58.5	66.4	59.2
1-3	67.4	59.7	65.6	58.4
1-4	69.2	59.8	69.1	55.3

Table 5. Mitigated Future Traffic CNEL at Proposed Outdoor Use Areas of Parcel 2				
Receiver	Future Exterior Traffic CNEL			
	No Structure	With 6' High Free-Standing Sound Wall	Residence	Residence + 5' High Sound Wall
2-1	66.9	58.2	62.0	55.4
2-2	66.4	57.7	58.1	58.0
2-3	65.0	57.7	62.7	58.0
2-4	65.5	57.9	63.9	58.7

With the current project design, noise levels at outdoor use areas for Parcels 1 and 2 will exceed the 60 CNEL limit. Calculations show that in order to achieve noise levels in compliance with County of San Diego noise regulations for outdoor use areas, a free-standing sound attenuation barrier at least 8 feet in height is required as mitigation on Parcel 1, and a free-standing sound attenuation barrier at least 6 feet in height is required as mitigation for Parcel 2. The free-standing sound attenuation barrier as evaluated for Parcel 1 is shown in Figure 8: Site Plan Showing Free Standing Sound Attenuation Barrier Evaluation Location.

With the residence in place, the height of the sound attenuation barrier can be decreased to 7.5 feet high on Parcel 1, and 5 feet high on Parcel 2. With this mitigation in place, noise levels in the outdoor use areas of these properties will be in compliance with County of San Diego noise regulations.

Both sound attenuation barriers should be located on the east side of the proposed residences, enclosing an area of 4,800 square feet on Parcel 1, and 6,000 square feet on Parcel 2. Both sound attenuation barriers should either connect to or overlap with the residence structure, in order to minimize sound transmission through gaps between the structures. If desired, the 7.5-foot high barrier required on Parcel 1 may be constructed as a 6-foot high wall on top of a 1.5-foot high berm, or another configuration that would achieve the equivalent height. The approximate locations and possible configurations of the barriers are shown in Figure 7: Site Plan Showing Proposed Sound Attenuation Barrier Locations.

Additionally, a sound attenuation wall should be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps, through or below the

wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove and must be at least one-inch thick or have a density of at least 3½ pounds per square foot. Where architectural or aesthetic factors allow, glass or clear plastic may be used on the upper portion, if it is desirable to preserve a view. Sheet metal of 18-gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Any door or gate(s) must be designed with overlapping closures on the bottom and sides and meet the minimum specifications of the wall materials described above. The gate(s) may be of ¾-inch or better wood, solid-sheet metal of at least 18-gauge metal, or an exterior-grade solid-core steel door with prefabricated door jambs.

## **5.2 Interior**

The State of California requires buildings to be designed in order to attenuate, control, and maintain interior noise levels to below 45 CNEL in habitable multi-family residential space. Current exterior building construction is generally expected to achieve at least 15 decibels of exterior-to-interior noise attenuation, with windows opened. Therefore, proposed project building structures exposed to exterior noise levels greater than 60 CNEL could be subject to interior noise levels exceeding the 45 CNEL noise limit for residential habitable space.

The exterior facades of the both residences will all be exposed to between 65 and 70 CNEL in the future noise environment; however, achieving interior levels of 45 CNEL or less can still be achieved with proper mitigation. Wall construction and glazing can be selected to achieve necessary attenuation. If desired, an exterior to interior analysis can be performed when building plans become available, and appropriate recommendations can be made.

## **5.3 Temporary Construction Noise**

Section 36.410 (b) of the County of San Diego Noise Ordinance states that construction equipment shall not be operated so as to cause noise at a level in excess of 75 dBA for more than 8 hours during any 24-hour period, when measured at the property lines. The County of San Diego Noise Specialist, John Bennett, has requested that this regulation be interpreted as follows: the average eight-hour equivalent noise level of the construction equipment shall not exceed 75 dBA.

Since the building pad has already been prepared on Parcel 1, and the residence on Parcel 2 is existing, there is very little site preparation that needs to take place prior to the actual construction of the residence. Therefore, it has been determined that temporary construction noise will not be a substantial nuisance to surrounding residences. Nevertheless, equipment used in construction shall be maintained in proper operating condition, and engines shall be equipped with appropriate mufflers. Additionally, construction should be limited to the hours of 7 a.m. to 7 p.m., Monday through Saturday, in accordance with County of San Diego regulations. With these recommendations, it is expected that construction equipment noise levels will be below an average eight-hour equivalent noise level of 75 dBA, in compliance with County of San Diego regulations.

## 6.0 CERTIFICATION

The findings and recommendations of this acoustical analysis report are based on the information available and are a true and factual analysis of the potential acoustical issues associated with the Arabshahi Silver Tree Lane subdivision project in the unincorporated area of the County of San Diego, California. This report was prepared by Amy Lynn Hool and Douglas K. Eilar.

A handwritten signature in blue ink, appearing to read 'DK Eilar', written over a horizontal line.

Douglas K. Eilar  
Principal/Senior Acoustical Consultant

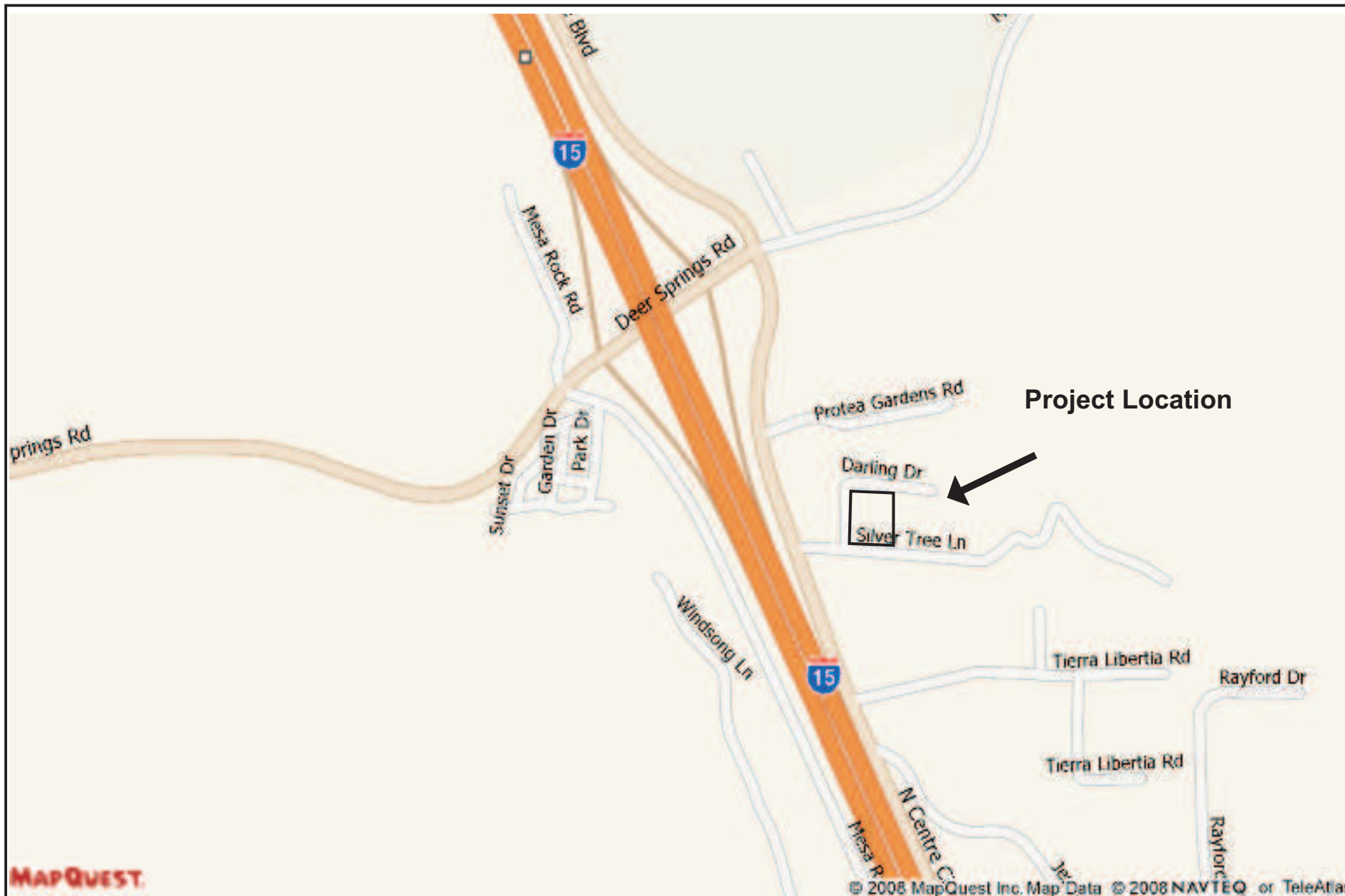
A handwritten signature in blue ink, appearing to read 'Amy Lynn Hool', written over a horizontal line.

Amy Lynn Hool, Acoustical Consultant

## 7.0 REFERENCES

1. 2007 California Building Code, Based on the 2006 International Building Code, Chapter 12, Section 1207 – *Sound Transmission Control*.
2. California Department of Transportation, Traffic Noise Model.
3. County of San Diego Noise Element to the General Plan.
4. County of San Diego Noise Ordinance.
5. Harris, Cyril M., Handbook of Acoustical Measurements and Noise Control, 3<sup>rd</sup> Edition, Acoustical Society of America, 1998.
6. Heeden, Robert A., Compendium of Materials for Noise Control, U.S. Department of Health, Education and Welfare, National Institute for Occupational Safety and Health, November 1978.
7. Irvine, Leland K., Richards, Roy L., Acoustics and Noise Control Handbook for Architects and Builders, Kreiger Publishing Company, 1998.
8. NBS Building Sciences Series 77, Acoustical and Thermal Performance on Exterior Residential Walls, U.S. Department of Commerce/National Bureau of Standards, November 1976.
9. Western Electro-Acoustic Laboratory, Inc., 1711 Sixteenth Street, Santa Monica, California 90404, 213-80-9268, Sound Transmission Loss Vs. Glazing Type, Window Size and Air Filtration, January 1985. The research described in this report was prepared for the California Association of Window Manufacturers, 823 North Harbor Boulevard, Suite E, Fullerton, California 92632, 714-525-7088.
10. United States Department of Transportation Federal Highway Administration, Construction Equipment Noise Levels and Ranges.
11. Wyle Laboratories, Development of Ground Transportation Systems Noise Contours for the San Diego Region, December, 1973

## FIGURES

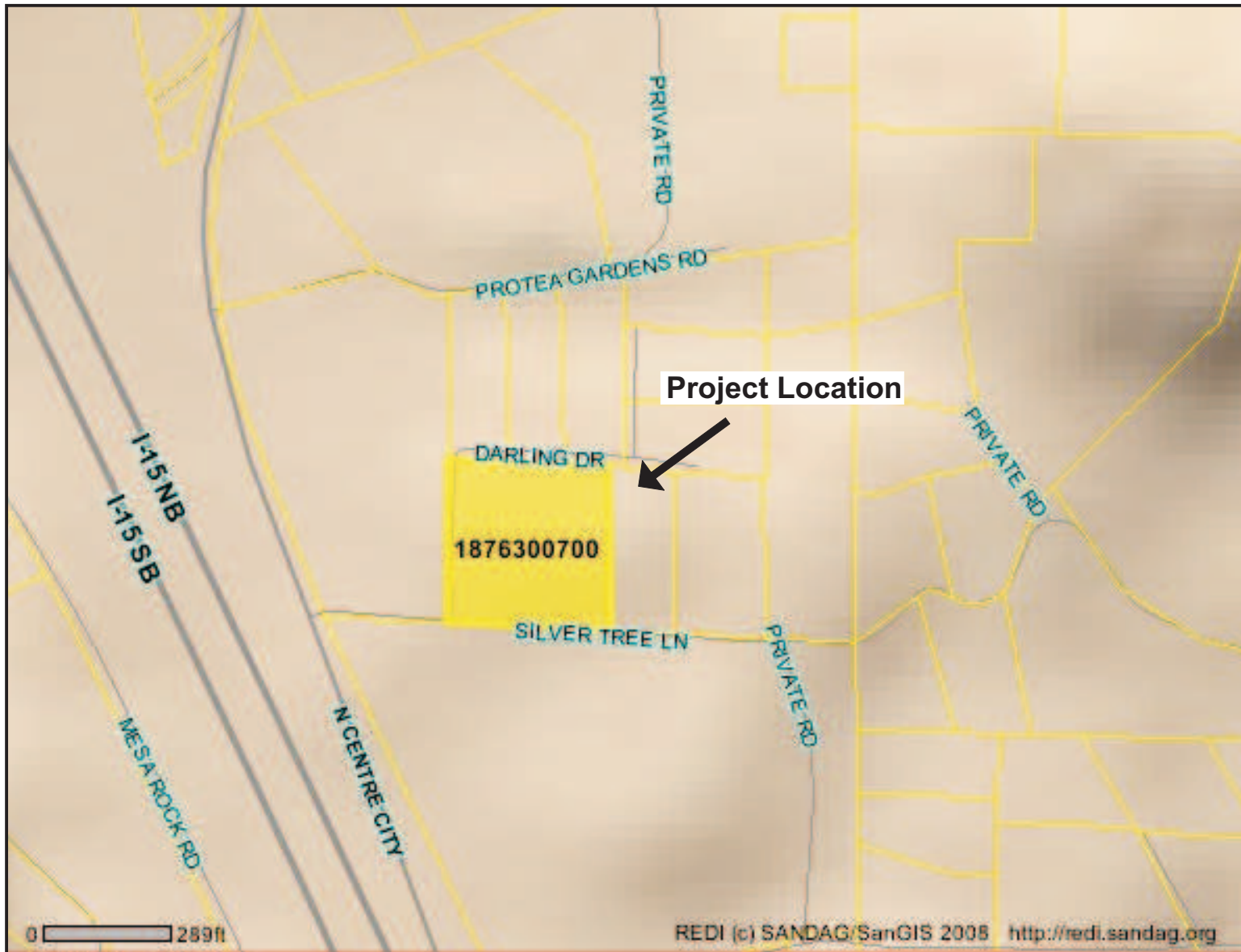


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Vicinity Map  
 Job # A81206N1

Figure 1





**Project Location**



**San Diego  
County  
Assessor's  
Parcel Number:  
  
187-630-07-00**



No Scale



**SanGIS**

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**Assessor's Parcel Map  
Job # A81206N1**

**Figure 2**

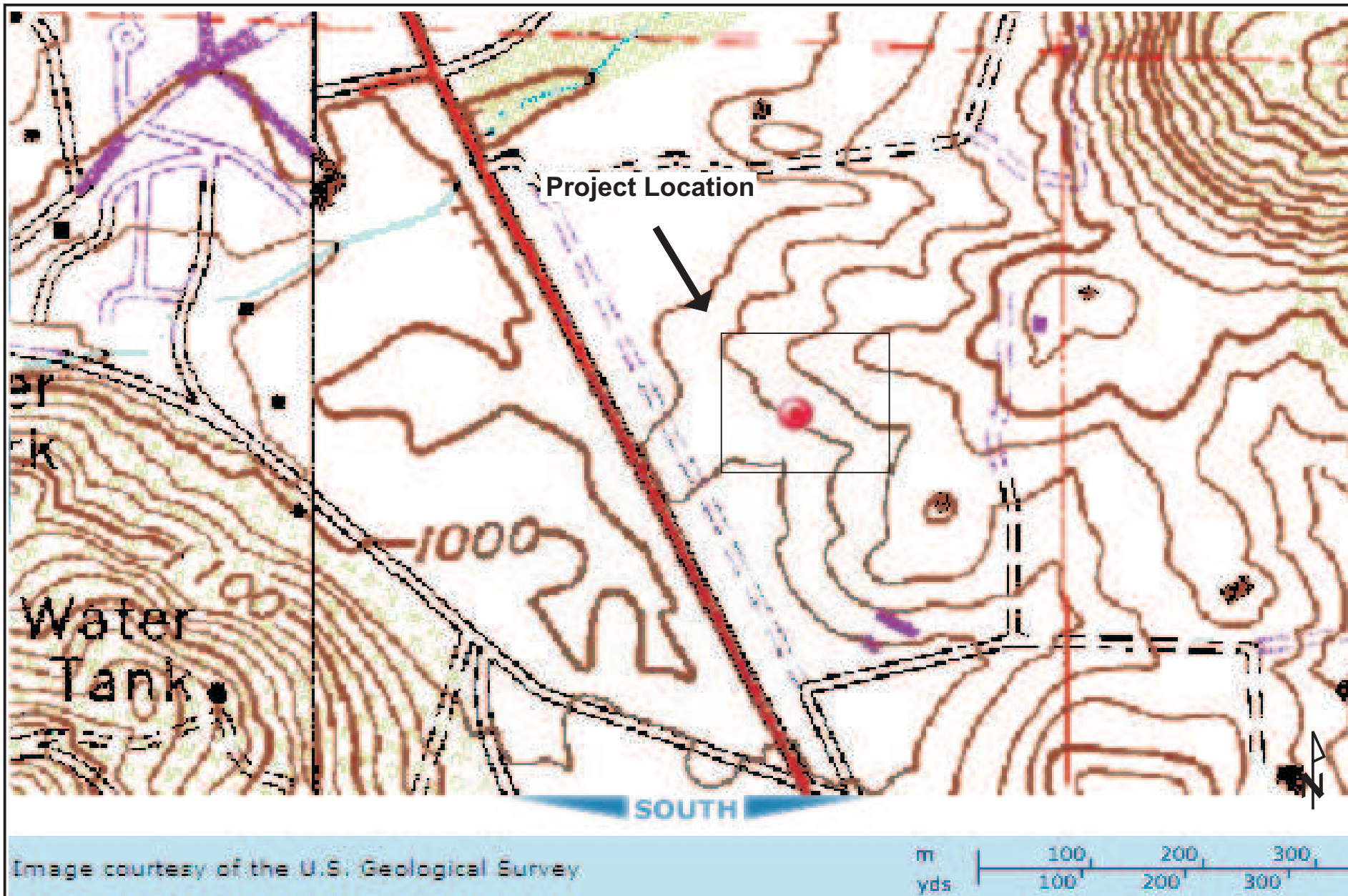


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Satellite Aerial Photograph  
Job # A81206N1

Figure 3



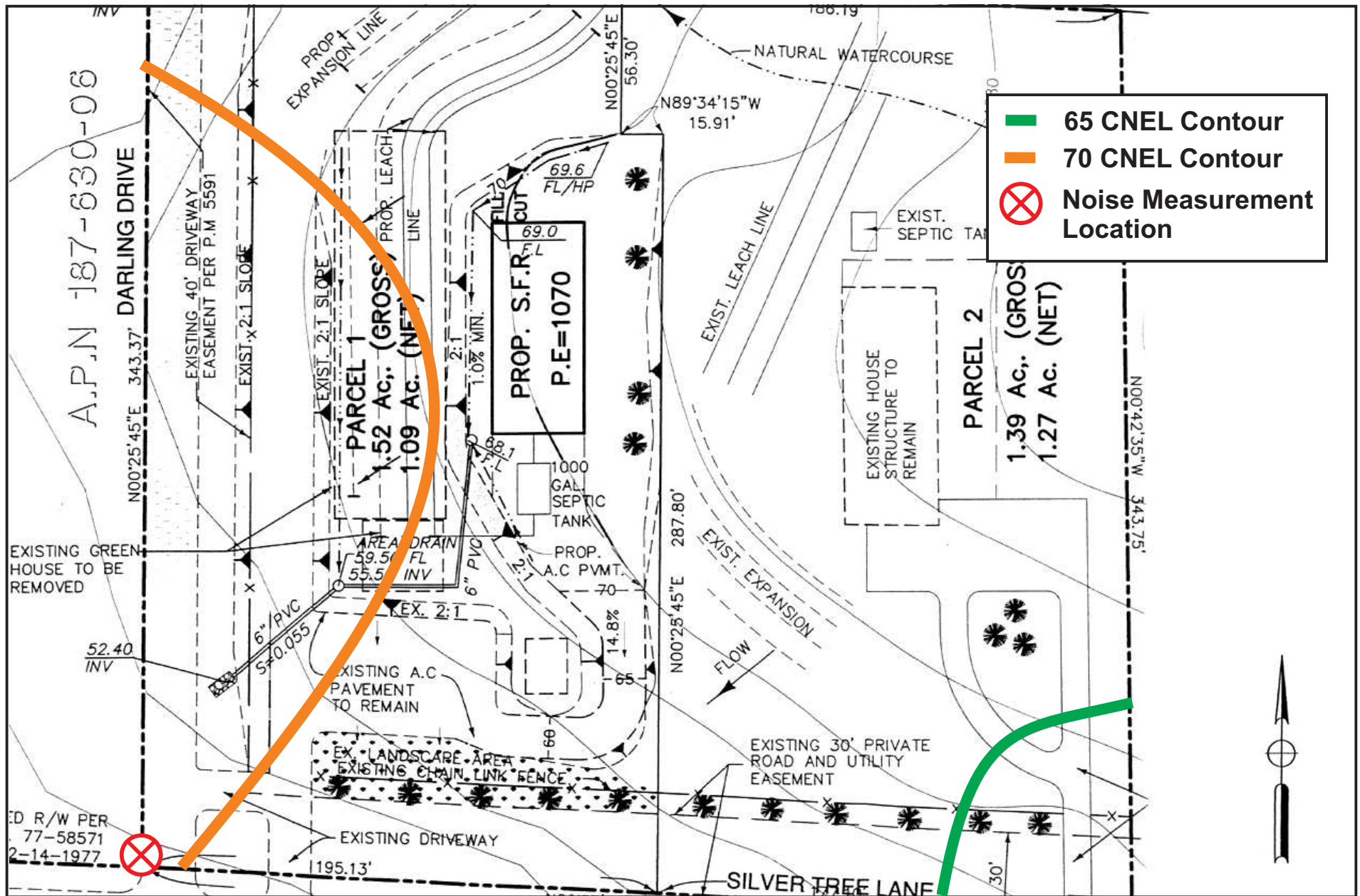


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Topographic Map  
Job # A81206N1

Figure 4





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Site Plan Showing Future Traffic CNEL  
Contours and Noise Measurement Location  
Job # A81206N1

Figure 6







## **APPENDIX A**

### **Site Plans**



**VICINITY MAP**

NOT TO SCALE

A schematic diagram of a vegetated landscape area. It consists of a rectangular box filled with small circles, representing vegetation. An arrow points from the left towards the box. To the right of the box, the text "DRAINAGE FLOW" is written above "VEGETATED/LANDSCAPE AREA".

N CENTRE CITY PKWY

A.P.N. 137-530-06

A.P.N  
187-630-05

A.P.N.  
187-630-04

A.P.N  
187-630-03

PARCEL 3  
P.M 5591  
A.P.N 187-630-08

**OWNER'S CERTIFICATE:**

I HEREBY CERTIFY THAT I AM THE RECORD OWNER, AS EQUALIZED COUNTY ASSESSMENT, OF THE PROPERTY SHOWN ON PARCEL MAP. ALL OF MY CONTIGUOUS OWNERSHIP WITH BOUNDARIES OF THE TENTATIVE PARCEL MAP ARE SHOWN OF THE LOTS IN MY OWNERSHIP IS INDICATED ON THE MAP. I UNDERSTAND THAT PROPERTY IS CONSIDERED AS CONSIDERED BY ROADS, STREETS, UTILITY EASEMENTS OR RAILROAD RIGHT-OF-WAY. "FREEWAY" AS DEFINED IN SECTION 23.5 OF THE STREETS AND HIGHWAY CODE, SHALL NOT BE CONSIDERED AS ROADS OR STREETS.

I FURTHER CERTIFY THAT I WILL NOT, THE THIS APPLICATION, CREATE OR CAUSE TO BE CREATED, OR WILL NOT HAVE PARTICIPATED IN THE CREATION OF MORE THAN FOUR PARCELS ON CONTIGUOUS PROPERTY UNLESS SUCH CONTIGUOUS PARCELS WERE CREATED BY MAJOR SUBDIVISION. FOR PURPOSES OF THIS CERTIFICATION, THE TERM "PARTICIPATED" MEANS HAVING COOPERATED WITH OR ACTED IN A PLANNING, COORDINATING OR DECISION-MAKING CAPACITY IN ANY FORMAL OR INFORMAL ASSOCIATION OR PARTNERSHIP FOR THE PURPOSE OF DIVIDING REAL PROPERTY.

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.

EXECUTED THIS \_\_\_\_\_ OF \_\_\_\_\_, 2008 AT \_\_\_\_\_

SIGNATURE

SIGNATURE

NAME: MOHAMMAD & INDOUNG PRAIWAN ARABSHAHI  
1542 SILVER TREE LN.  
ESCONDIDO, CA. 92026  
TEL: 760-518-2219

NOTES:

1. ASSESSOR'S PARCEL NUMBER : 187-630-07
2. LEGAL DESCRIPTION OF LAND:  

PARCEL 2 OF PARCEL MAP NO. 5591, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, BEING A PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OS SECTION 30, TOWNSHIP 11 SOUTH, RANGE 2 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY.
3. GENERAL PLAN DESIGNATION: 1
4. COMMUNITY/ SUBREGIONAL PLAN AREA: NORTH COUNTY METRO
5. REGIONAL CATEGORY: CUD A
6. ZONING INFORMATION

ZONE		
USE REGULATIONS		A70
ANIMAL REGULATIONS		
DEVELOPMENT REGULATIONS	DENSITY	L
	LOT SIZE	1 AC.
	BUILDING TYPE	C
	MAX. FLOOR AREA	—
	FLOOR AREA RATIO	—
	HEIGHT	G
	LOT COVERAGE	—
	SETBACK	C
	OPEN SPACE	—
SPECIAL AREA REGS.		B

TAX RATE AREA: 74090  
CALIFORNIA COORDINATES: 374-1731

7. ASSOCIATED PERMITS: NONE

7. ASSOCIATED PERMITS: NONE

8. LOCATION AND STATUS OF EXISTING LEGAL ACCESS TO SUBJECT PROPERTY FROM A PUBLICLY MAINTAINED ROAD. (I.E. RECORDED EASEMENT, UNRECORDED EASEMENT; IDENTIFY AND SPECIFY WIDTH) 60' SILVER TREE LANE

9. WATER DISTRICT: VALLEY CENTER MUNICIPAL WATER DISTRICT

10. SEWER DISTRICT: EXISTING AND PROPOSED PARCELS TO BE SERVED BY PRIVATE SEPTIC SYSTEM.

11. FIRE DISTRICT: DEER SPRINGS FIRE DEPARTMENT

12. SCHOOL DISTRICTS: ESCONDIDO UNION HIGH SCHOOL DISTRICT

ALL LOTS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING / COMMERCIAL / INDUSTRIAL UNIT ALLOWED BY THIS SUBDIVISION.

IT IS THE RESPONSIBILITY OF THE SUBDIVIDER TO PROVIDE INSURABLE ACCESS  
TO EACH PARCEL MAP CREATED BY THIS MAP.

SOURCE OF TOPOGRAPHY: COUNTY OF SAN DIEGO, TOPOGRAPHIC SURVEY

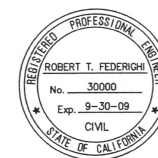
PRELIMINARY GRADING PLAN NOTE:

"THIS PLAN IS PROVIDED JUST FOR ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL TO PERFORM ANY GRADING SHOWN HEREON. PROPERTY OWNER TO OBTAIN VALID GRADING PERMIT BEFORE COMMENCING SUCH ACTIVITY."

### POST CONSTRUCTION BMP'S

1. SINCE ALL LOT DRAINAGE IS SURFACE FLOW, WATER WILL PERCOLATE BACK INTO THE GROUND AND AT THE SAME TIME MAKE THE POLLUTANTS CLEANED.
2. RUNOFF FROM ALL IMPERVIOUS SURFACES WILL BE DIRECTED TO A VEGETATED / LANDSCAPE AREAS.

SIGNATURE OF PERSON WHO PREPARED THE TENTATIVE PARCEL MAP  
ROBERT T. FEDERIGHI RCE NO. 30000 EXP. DATE: 9-30-09  
RRF & ASSOCIATES  
22734 GIERSON AVE. WILDOMAR, CA 92595  
TEL: (951) 973-8076



GRAPHIC SCALE

( IN FEET )

1 inch = 40 ft.

APPROXIMATE QUANTITIES:

PARCEL 1: CUT: 500 C.Y.

PARCEL 2: EXISTING PAD

DISTURBED AREA = 1.0 Acs

FILL: 500 C.Y

R/W 60' R/W

2.1 MAX

EXISTING NATURAL GROUND

24' EXISTING A.C. PAVEMENT

2.0%

SILVER TREE LANE

PRELIMINARY GRADING PLAN NOTE:

## **APPENDIX B**

### **Traffic Noise Model (TNM) Data and Results**

**INPUT: ROADWAYS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.				19 December 2008							
Amy Hool				TNM 2.5							
INPUT: ROADWAYS											
PROJECT/CONTRACT:		A81206N1 Silver Tree Subdivision								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA	
RUN:		Calibration									
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)		Flow Control			Segment		
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
I-15 Northbound	48.0	point1	1	892.8	-2,232.0	1,040.00				Average	
		point24	24	223.2	-1,116.0	1,035.00				Average	
		point2	2	-446.4	0.0	1,030.00				Average	
		point23	23	-892.8	1,116.0	1,030.00				Average	
		point3	3	-1,339.2	2,232.0	1,030.00					
I-15 Southbound	48.0	point4	4	-1,387.2	2,232.0	1,030.00				Average	
		point25	25	-940.8	1,116.0	1,030.00				Average	
		point5	5	-494.4	0.0	1,030.00				Average	
		point26	26	175.2	-1,116.0	1,035.00				Average	
		point6	6	844.8	-2,232.0	1,040.00					
N Centre City NB	24.0	point7	7	967.8	-2,232.0	1,034.00				Average	
		point8	8	-347.4	0.0	1,030.00				Average	
		point9	9	-422.4	1,773.6	1,040.00					
N Centre City SB	24.0	point10	10	-446.4	1,773.6	1,040.00				Average	
		point11	11	-371.4	0.0	1,030.00				Average	
		point12	12	967.8	-2,232.0	1,034.00					
I-15 NB off-ramp	12.0	point13	13	-422.4	0.0	1,030.00				Average	
		point14	14	-669.6	1,413.6	1,045.00					
Silver Tree Lane	12.0	point15	15	-335.4	0.0	1,030.00				Average	
		point22	22	0.0	0.0	1,040.00				Average	
		point16	16	744.0	0.0	1,086.00					
Mountain Meadow	48.0	point17	17	744.0	2,083.2	1,122.00				Average	
		point18	18	0.0	1,860.0	1,074.00				Average	
		point19	19	-446.4	1,785.6	1,040.00				Average	
		point20	20	-669.6	1,437.6	1,045.00				Average	Y

INPUT: ROADWAYS

A81206N1 Silver Tree Subdivision

		point21	21	-1,190.4	1,190.4	1,045.00					
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**INPUT: TRAFFIC FOR LAeq1h Volumes**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.													
Amy Hool													
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	A81206N1 Silver Tree Subdivision												
RUN:	Calibration												
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos										
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
I-15 Northbound	point1	1	3389	65	170	65	211	65	0	0	0	0	
	point24	24	3389	65	170	65	211	65	0	0	0	0	
	point2	2	3389	65	170	65	211	65	0	0	0	0	
	point23	23	3389	65	170	65	211	65	0	0	0	0	
	point3	3											
I-15 Southbound	point4	4	3441	65	172	65	214	65	0	0	0	0	
	point25	25	3441	65	172	65	214	65	0	0	0	0	
	point5	5	3441	65	172	65	214	65	0	0	0	0	
	point26	26	3441	65	172	65	214	65	0	0	0	0	
	point6	6											
N Centre City NB	point7	7	166	55	5	55	2	55	0	0	0	0	
	point8	8	166	55	5	55	2	55	0	0	0	0	
	point9	9											
N Centre City SB	point10	10	166	55	5	55	2	55	0	0	0	0	
	point11	11	166	55	5	55	2	55	0	0	0	0	
	point12	12											
I-15 NB off-ramp	point13	13	302	45	15	45	19	45	0	0	0	0	
	point14	14											
Silver Tree Lane	point15	15	20	25	0	0	0	0	0	0	0	0	
	point22	22	20	25	0	0	0	0	0	0	0	0	
	point16	16											
Mountain Meadow	point17	17	443	35	14	35	7	35	0	0	0	0	
	point18	18	443	35	14	35	7	35	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**A81206N1 Silver Tree Subdivision**

	point19	19	443	35	14	35	7	35	0	0	0	0
	point20	20	443	35	14	35	7	35	0	0	0	0
	point21	21										

**INPUT: RECEIVERS**

**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
<b>INPUT: RECEIVERS</b>												
<b>PROJECT/CONTRACT:</b>	<b>A81206N1 Silver Tree Subdivision</b>											
<b>RUN:</b>	<b>Calibration</b>											
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>	
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>	
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>	
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>		
Calibration	2	1	47.4	50.0	1,045.00	5.00	0.00	66	10.0	8.0	Y	

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.								19 December 2008					
Amy Hool								TNM 2.5					
								Calculated with TNM 2.5					
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:	A81206N1 Silver Tree Subdivision												
RUN:	Calibration												
BARRIER DESIGN:	INPUT HEIGHTS												
	Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
ATMOSPHERICS:	68 deg F, 50% RH												
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over Calculated	existing Crit'n Sub'l Inc	With Barrier					
								Type Impact	Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
Calibration	2	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								



**INPUT: RECEIVERS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
<b>INPUT: RECEIVERS</b>												
<b>PROJECT/CONTRACT:</b>	<b>A81206N1 Silver Tree Subdivision</b>											
<b>RUN:</b>	<b>Current Traffic Contours</b>											
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>	
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>	
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>	
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>		
Calibration/1	2	1	47.4	50.0	1,045.00	5.00	0.00	66	10.0	8.0	Y	
2	4	1	50.0	150.0	1,050.00	5.00	0.00	66	10.0	8.0	Y	
3	5	1	50.0	250.0	1,055.00	5.00	0.00	66	10.0	8.0	Y	
4	6	1	50.0	350.0	1,055.00	5.00	0.00	66	10.0	8.0	Y	
5	7	1	50.0	450.0	1,050.00	5.00	0.00	66	10.0	8.0	Y	
6	8	1	150.0	50.0	1,045.00	5.00	0.00	66	10.0	8.0	Y	
7	9	1	150.0	150.0	1,055.00	5.00	0.00	66	10.0	8.0	Y	
8	10	1	150.0	250.0	1,065.00	5.00	0.00	66	10.0	8.0	Y	
9	11	1	150.0	350.0	1,065.00	5.00	0.00	66	10.0	8.0	Y	
10	12	1	150.0	450.0	1,060.00	5.00	0.00	66	10.0	8.0	Y	
11	13	1	250.0	50.0	1,050.00	5.00	0.00	66	10.0	8.0	Y	
12	14	1	250.0	150.0	1,065.00	5.00	0.00	66	10.0	8.0	Y	
13	15	1	250.0	250.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
14	16	1	250.0	350.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
15	17	1	250.0	450.0	1,065.00	5.00	0.00	66	10.0	8.0	Y	
16	18	1	350.0	50.0	1,060.00	5.00	0.00	66	10.0	8.0	Y	
17	19	1	350.0	150.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
18	20	1	350.0	250.0	1,080.00	5.00	0.00	66	10.0	8.0	Y	
19	21	1	350.0	350.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
20	22	1	350.0	450.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
21	23	1	450.0	50.0	1,065.00	5.00	0.00	66	10.0	8.0	Y	
22	24	1	450.0	150.0	10,754.00	5.00	0.00	66	10.0	8.0	Y	

**INPUT: RECEIVERS**

**A81206N1 Silver Tree Subdivision**

23	25	1	450.0	250.0	1,085.00	5.00	0.00	66	10.0	8.0	Y
24	26	1	450.0	350.0	1,085.00	5.00	0.00	66	10.0	8.0	Y
25	27	1	450.0	450.0	1,085.00	5.00	0.00	66	10.0	8.0	Y

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
22 December 2008												
TNM 2.5												
Calculated with TNM 2.5												
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b> A81206N1 Silver Tree Subdivision												
<b>RUN:</b> Current Traffic Contours												
<b>BARRIER DESIGN:</b> INPUT HEIGHTS												
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>ATMOSPHERICS:</b> 68 deg F, 50% RH												
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier</b>				<b>With Barrier</b>				
				<b>LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		
						<b>Calculated</b>	<b>Crit'n</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
			<b>dBA</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>		<b>dBA</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>
Calibration/1	2	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
2	4	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
3	5	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
4	6	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
5	7	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
6	8	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
7	9	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
8	10	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
9	11	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
10	12	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
11	13	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
12	14	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
13	15	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
14	16	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
15	17	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
16	18	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
17	19	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
18	20	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
19	21	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
20	22	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
21	23	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
22	24	1	0.0	58.2	66	58.2	10	----	58.2	0.0	8	-8.0
23	25	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
24	26	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

25	27	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		25	0.0	0.0	0.0							
All Impacted		4	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	A81206N1 Silver Tree Subdivision											
RUN:	Future Traffic Contours											
Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
I-15 Northbound	point1	1	5631	65	282	65	351	65	0	0	0	0
	point24	24	5631	65	282	65	351	65	0	0	0	0
	point2	2	5631	65	282	65	351	65	0	0	0	0
	point23	23	5631	65	282	65	351	65	0	0	0	0
	point3	3										
I-15 Southbound	point4	4	5371	65	269	65	335	65	0	0	0	0
	point25	25	5371	65	269	65	335	65	0	0	0	0
	point5	5	5371	65	269	65	335	65	0	0	0	0
	point26	26	5371	65	269	65	335	65	0	0	0	0
	point6	6										
N Centre City NB	point7	7	554	55	17	55	9	55	0	0	0	0
	point8	8	554	55	17	55	9	55	0	0	0	0
	point9	9										
N Centre City SB	point10	10	554	55	17	55	9	55	0	0	0	0
	point11	11	554	55	17	55	9	55	0	0	0	0
	point12	12										
I-15 NB off-ramp	point13	13	313	45	16	45	19	45	0	0	0	0
	point14	14										
Silver Tree Lane	point15	15	20	25	0	0	0	0	0	0	0	0
	point22	22	20	25	0	0	0	0	0	0	0	0
	point16	16										
Mountain Meadow	point17	17	1551	55	49	55	24	55	0	0	0	0
	point18	18	1551	55	49	55	24	55	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**A81206N1 Silver Tree Subdivision**

	point19	19	1551	55	49	55	24	55	0	0	0	0
	point20	20	1551	55	49	55	24	55	0	0	0	0
	point21	21										

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
22 December 2008												
TNM 2.5												
Calculated with TNM 2.5												
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b> A81206N1 Silver Tree Subdivision												
<b>RUN:</b> Future Traffic Contours												
<b>BARRIER DESIGN:</b> INPUT HEIGHTS												
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>ATMOSPHERICS:</b> 68 deg F, 50% RH												
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing Calculated</b>	<b>Crit'n Sub'l Inc</b>	<b>With Barrier</b>				
								<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Calibration/1	2	1	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0
2	4	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
3	5	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
4	6	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
5	7	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
6	8	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
7	9	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
8	10	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
9	11	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
10	12	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
11	13	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
12	14	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
13	15	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
14	16	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
15	17	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
16	18	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
17	19	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
18	20	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
19	21	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
20	22	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
21	23	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
22	24	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
23	25	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
24	26	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

25	27	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		25	0.0	0.0	0.0							
All Impacted		12	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							



**INPUT: RECEIVERS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
<b>INPUT: RECEIVERS</b>												
<b>PROJECT/CONTRACT:</b>	<b>A81206N1 Silver Tree Subdivision</b>											
<b>RUN:</b>	<b>Outdoor Use-No Mitigation</b>											
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>	
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>	
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>	
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>		
1-1	39	1	254.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
1-2	40	1	254.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
1-3	41	1	282.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
1-4	42	1	282.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
2-1	43	1	397.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
2-2	44	1	397.5	290.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
2-3	45	1	472.5	290.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
2-4	46	1	472.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.									12 January 2009			
Amy Hool									TNM 2.5			
									Calculated with TNM 2.5			
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		A81206N1 Silver Tree Subdivision										
RUN:		Outdoor Use-No Mitigation										
BARRIER DESIGN:		INPUT HEIGHTS								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over Calculated	existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal dB
			dB	dB	dB	dB	dB		dB	dB	dB	dB
1-1	39	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
1-2	40	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
1-3	41	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
1-4	42	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
2-1	43	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
2-2	44	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
2-3	45	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
2-4	46	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		8	0.0	0.0	0.0							
All Impacted		3	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

INPUT: BARRIERS

A81206N1 Silver Tree Subdivision

Eilar Associates, Inc.										12 January 2009									
Amy Hool										TNM 2.5									
INPUT: BARRIERS																			
PROJECT/CONTRACT:										A81206N1 Silver Tree Subdivision									
RUN:										Outdoor Use-Sound Wall as Mitigation									
Barrier										Points									
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per			X	Y	Z	at	Seg Ht	Perturbs	On	Important	
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Lot 1 Wall	W	0.00	99.99	0.00				0.00	point22	22	292.0	320.0	1,070.00	8.00	0.00	0	0		
									point26	26	292.0	350.0	1,070.00	8.00	0.00	0	0		
									point25	25	244.0	350.0	1,070.00	8.00	0.00	0	0		
									point23	23	244.0	160.0	1,070.00	8.00	0.00	0	0		
									point33	33	292.0	160.0	1,070.00	8.00	0.00	0	0		
									point24	24	292.0	320.0	1,070.00	8.00					
Lot 2 Wall	W	0.00	99.99	0.00				0.00	point27	27	482.5	270.0	1,075.00	6.00	0.00	0	0		
									point28	28	482.5	300.0	1,075.00	6.00	0.00	0	0		
									point29	29	387.5	300.0	1,075.00	6.00	0.00	0	0		
									point30	30	387.5	200.0	1,075.00	6.00	0.00	0	0		
									point32	32	482.5	200.0	1,075.00	6.00	0.00	0	0		
									point31	31	482.5	270.0	1,075.00	6.00					

**INPUT: RECEIVERS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
<b>INPUT: RECEIVERS</b>												
<b>PROJECT/CONTRACT:</b>	<b>A81206N1 Silver Tree Subdivision</b>											
<b>RUN:</b>	<b>Outdoor Use-Sound Wall as Mitigation</b>											
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>	
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>	
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>	
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>		
1-1	29	1	254.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
1-2	30	1	254.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
1-3	31	1	282.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
1-4	32	1	282.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y	
2-1	34	1	397.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
2-2	35	1	397.5	290.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
2-3	36	1	472.5	290.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	
2-4	37	1	472.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y	

RESULTS: SOUND LEVELS						A81206N1 Silver Tree Subdivision							
Eilar Associates, Inc.						12 January 2009							
Amy Hool						TNM 2.5							
						Calculated with TNM 2.5							
<b>RESULTS: SOUND LEVELS</b>													
<b>PROJECT/CONTRACT:</b>	A81206N1 Silver Tree Subdivision												
<b>RUN:</b>	Outdoor Use-Sound Wall as Mitigation												
<b>BARRIER DESIGN:</b>	INPUT HEIGHTS												
	Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>ATMOSPHERICS:</b>	68 deg F, 50% RH												
<b>Receiver</b>													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal dB	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB		
1-1	29	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0	
1-2	30	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0	
1-3	31	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0	
1-4	32	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0	
2-1	34	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0	
2-2	35	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0	
2-3	36	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0	
2-4	37	1	0.0	55.9	66	55.9	10	----	55.9	0.0	8	-8.0	
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>										
			<b>Min</b>	<b>Avg</b>	<b>Max</b>								
			<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected		8	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

INPUT: BARRIERS

A81206N1 Silver Tree Subdivision

Eilar Associates, Inc.				12 January 2009																			
Amy Hool				TNM 2.5																			
INPUT: BARRIERS																							
PROJECT/CONTRACT:				A81206N1 Silver Tree Subdivision																			
RUN:				Outdoor Use-Residence as Mitigation																			
Barrier																							
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment								
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per			X	Y	Z	at	Seg Ht	Perturbs	On	Important					
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-				
				Area	Vol.			Length							ment				tions?				
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft								
Lot 1 Residence	W	0.00	99.99	0.00				0.00	point33	33	222.0	232.0	1,070.00	15.00	0.00	0	0						
									point34	34	254.0	232.0	1,070.00	15.00	0.00	0	0						
									point35	35	254.0	312.0	1,070.00	15.00	0.00	0	0						
									point36	36	222.0	312.0	1,070.00	15.00	0.00	0	0						
									point37	37	222.0	232.0	1,070.00	15.00									
Lot 2 Residence	W	0.00	99.99	0.00				0.00	point38	38	350.0	200.0	1,075.00	15.00	0.00	0	0						
									point39	39	350.0	297.5	1,075.00	15.00	0.00	0	0						
									point40	40	387.5	297.5	1,075.00	15.00	0.00	0	0						
									point41	41	387.5	200.0	1,075.00	15.00	0.00	0	0						
									point42	42	350.0	200.0	1,075.00	15.00									

**INPUT: RECEIVERS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.											
Amy Hool											
<b>INPUT: RECEIVERS</b>											
<b>PROJECT/CONTRACT:</b>	<b>A81206N1 Silver Tree Subdivision</b>										
<b>RUN:</b>	<b>Outdoor Use-Residence as Mitigation</b>										
<b>Receiver</b>											
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>	
1-1	29	1	254.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
1-2	30	1	254.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
1-3	31	1	282.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
1-4	32	1	282.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
2-1	34	1	397.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y
2-2	35	1	397.5	290.0	1,075.00	5.00	0.00	66	10.0	8.0	Y
2-3	36	1	472.5	290.0	1,075.00	5.00	0.00	66	10.0	8.0	Y
2-4	37	1	472.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
12 January 2009												
TNM 2.5												
Calculated with TNM 2.5												
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b>												
A81206N1 Silver Tree Subdivision												
<b>RUN:</b>												
Outdoor Use-Residence as Mitigation												
<b>BARRIER DESIGN:</b>												
INPUT HEIGHTS												
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>ATMOSPHERICS:</b>												
68 deg F, 50% RH												
<b>Receiver</b>												
<b>Name</b>												
<b>No.</b>												
<b>#DUs</b>												
<b>Existing LAeq1h</b>												
<b>No Barrier LAeq1h</b>												
<b>Calculated</b>												
<b>Crit'n</b>												
<b>Increase over existing</b>												
<b>Calculated</b>												
<b>Crit'n</b>												
<b>Sub'l Inc</b>												
<b>Type Impact</b>												
<b>Calculated</b>												
<b>LAeq1h</b>												
<b>Noise Reduction</b>												
<b>Calculated</b>												
<b>Goal</b>												
<b>Calculated</b>												
<b>minus</b>												
<b>Goal</b>												
<b>dBA</b>												
<b>dBA</b>												
<b>dBA</b>												
<b>dB</b>												
<b>dB</b>												
<b>dB</b>												
<b>dB</b>												
1-1	29	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
1-2	30	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
1-3	31	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
1-4	32	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
2-1	34	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
2-2	35	1	0.0	56.1	66	56.1	10	----	56.1	0.0	8	-8.0
2-3	36	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
2-4	37	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
<b>Dwelling Units</b>												
<b># DUs</b>												
<b>Noise Reduction</b>												
<b>Min</b>												
<b>Avg</b>												
<b>Max</b>												
<b>dB</b>												
<b>dB</b>												
<b>dB</b>												
All Selected		8	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							



INPUT: BARRIERS

A81206N1 Silver Tree Subdivision

Eilar Associates, Inc.				15 January 2009																			
Amy Hool				TNM 2.5																			
INPUT: BARRIERS																							
PROJECT/CONTRACT:				A81206N1 Silver Tree Subdivision																			
RUN:				Outdoor Use-Residence + Sound Wall																			
Barrier												Points											
Name		Type	Height		If Wall	If Berm		Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment								
			Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per		X	Y	Z	at	Seg	Ht	Perturbs	On	Important				
					Unit	Unit	Width		Unit					Point	Incre-	#Up	#Dn	Struct?	Reflec-				
					Area	Vol.			Length						ment				tions?				
			ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft		ft	ft	ft	ft	ft								
Lot 1 Residence		W	0.00	99.99	0.00				0.00	point33	33	222.0	232.0	1,070.00	15.00	0.00	0	0					
										point34	34	254.0	232.0	1,070.00	15.00	0.00	0	0					
										point35	35	254.0	312.0	1,070.00	15.00	0.00	0	0					
										point36	36	222.0	312.0	1,070.00	15.00	0.00	0	0					
										point37	37	222.0	232.0	1,070.00	15.00								
Lot 2 Residence		W	0.00	99.99	0.00				0.00	point38	38	350.0	200.0	1,075.00	15.00	0.00	0	0					
										point39	39	350.0	297.5	1,075.00	15.00	0.00	0	0					
										point40	40	387.5	297.5	1,075.00	15.00	0.00	0	0					
										point41	41	387.5	200.0	1,075.00	15.00	0.00	0	0					
										point42	42	350.0	200.0	1,075.00	15.00								
Lot 1 Sound Wall		W	0.00	99.99	0.00				0.00	point62	62	292.0	350.0	1,070.00	7.50	0.00	0	0					
										point63	63	255.0	350.0	1,070.00	7.50	0.00	0	0					
										point64	64	255.0	160.0	1,070.00	7.50	0.00	0	0					
										point65	65	292.0	160.0	1,070.00	7.50								
Lot 2 Sound Wall		W	0.00	99.99	0.00				0.00	point67	67	452.5	200.0	1,075.00	5.00	0.00	0	0					
										point68	68	389.5	200.0	1,075.00	5.00	0.00	0	0					
										point69	69	389.5	340.0	1,075.00	5.00	0.00	0	0					
										point70	70	452.5	340.0	1,075.00	5.00								

**INPUT: RECEIVERS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.											
Amy Hool											
<b>INPUT: RECEIVERS</b>											
<b>PROJECT/CONTRACT:</b>	<b>A81206N1 Silver Tree Subdivision</b>										
<b>RUN:</b>	<b>Outdoor Use-Residence + Sound Wall</b>										
<b>Receiver</b>											
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1-1	29	1	259.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
1-2	30	1	287.0	170.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
1-3	31	1	287.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
1-4	32	1	259.0	340.0	1,070.00	5.00	0.00	66	10.0	8.0	Y
2-1	34	1	397.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y
2-2	35	1	397.5	330.0	1,075.00	5.00	0.00	66	10.0	8.0	Y
2-3	36	1	447.5	330.0	1,075.00	5.00	0.00	66	10.0	8.0	Y
2-4	37	1	447.5	210.0	1,075.00	5.00	0.00	66	10.0	8.0	Y

**RESULTS: SOUND LEVELS**
**A81206N1 Silver Tree Subdivision**

Eilar Associates, Inc.												
Amy Hool												
21 January 2009												
TNM 2.5												
Calculated with TNM 2.5												
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b>												
A81206N1 Silver Tree Subdivision												
<b>RUN:</b>												
Outdoor Use-Residence + Sound Wall												
<b>BARRIER DESIGN:</b>												
INPUT HEIGHTS												
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>ATMOSPHERICS:</b>												
68 deg F, 50% RH												
<b>Receiver</b>												
<b>Name</b>												
<b>No.</b>												
<b>#DUs</b>												
<b>Existing LAeq1h</b>												
<b>No Barrier LAeq1h</b>												
<b>Calculated</b>												
<b>Crit'n</b>												
<b>Increase over existing</b>												
<b>Calculated</b>												
<b>Crit'n</b>												
<b>Sub'l Inc</b>												
<b>Type Impact</b>												
<b>With Barrier</b>												
<b>Calculated LAeq1h</b>												
<b>Noise Reduction</b>												
<b>Calculated</b>												
<b>Goal</b>												
<b>Calculated minus Goal</b>												
<b>Calculated</b>												
<b>Goal</b>												
<b>Calculated</b>												
<b>Goal</b>												
1-1	29	1	0.0	55.8	66	55.8	10	----	55.8	0.0	8	-8.0
1-2	30	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0
1-3	31	1	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0
1-4	32	1	0.0	53.3	66	53.3	10	----	53.3	0.0	8	-8.0
2-1	34	1	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
2-2	35	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
2-3	36	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
2-4	37	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0
<b>Dwelling Units</b>												
<b># DUs</b>												
<b>Noise Reduction</b>												
<b>Min</b>												
<b>Avg</b>												
<b>Max</b>												
<b>dB</b>												
<b>dB</b>												
<b>dB</b>												
All Selected		8	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

## **APPENDIX C**

### **Pertinent Sections of the County of San Diego Noise Element to the General Plan**

## **Policy 4b**

Because exterior community noise equivalent levels (CNEL) above 60 decibels and/or interior CNEL above 45 decibels may have an adverse effect on public health and welfare, it is the policy of the County of San Diego that:

1. Whenever it appears that new *development* may result in any (existing or future) *noise sensitive land use* being subject to noise levels of CNEL equal to 60 *decibels (A)* or greater, an acoustical analysis shall be required.
2. If the acoustical analysis shows that noise levels at any *noise sensitive land use* will exceed CNEL equal to 60 decibels, modifications shall be made to the *development* which reduce the *exterior noise* level to less than CNEL of 60 *decibels (A)* and the *interior noise* level to less than CNEL of 45 *decibels (A)*.
3. If modifications are not made to the *development* in accordance with paragraph 2 above, the *development* shall not be approved unless a finding is made that there are specifically identified overriding social or economic considerations which warrant approval of the development without such modification; provided, however, if the acoustical study shows that sound levels for any noise sensitive land use will exceed a CNEL equal to 75 *decibels (A)* even with such modifications, the *development* shall not be approved irrespective of such social or economic considerations.

## **Definitions, Notes & Exceptions**

"*Decibels (A)*" refers to A-weighted sound levels as noted on page VIII-2 of this Element.

"*Development*" means any physical development including but not limited to residences, commercial, or industrial facilities, roads, civic buildings, hospitals, schools, airports, or similar facilities.

"*Exterior noise*":

- (a) For single family detached dwelling projects, "exterior noise" means noise measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum area:

(i) Net lot area up to 4,000 sq. ft.:	400 square feet
(ii) Net lot area 4,000 sq. ft. to 10 ac.:	10% of net lot area
(iii) Net lot area over 10 ac.:	1 ac.
- (b) For all other projects, "exterior noise" means noise measured at all exterior areas which are provided for *group or private usable open space* purposes.